Teacher Education

SUPPLEMENTARY LEARNING MATERIALS AND TECHNIQUES

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TEACHER EDUCATION

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FOREWORD

Teachers teach according to the conceptions they have of what it means to teach. Until recently, these mental pictures of teaching often consisted of using drills, question-and-answer recitation, periodical quizzes that students can bone up on, and final examinations that ask the student to recite back what he is told. As a field of knowledge grew, the course developed into a feverish race with time to cover ground, because many teachers thought the purpose of a course was to cover ground. This is called lesson learning rather than education and is an approach which, in days gone by, drove many students away from school and caused them to drop out.

Successful teachers have always made school an exciting and highly profitable experience. Not all teachers have the gift and resources for doing that kind of teaching. Now every teacher can do it. He can do it with the assistance of materials and methods that improve perception and understanding. He need not entertain the students. With modern aids to perception and vicarious experiences, he can teach better and do a much more thorough job in less time than the old way took.

In this number of *Teacher Education*, the first article describes how the Illinois State Normal University film program developed the basis for an audio-visual program. The second article tells how the classroom teacher can make a field trip a rich learning experience. The third article explains the use of radio and other audio aids in the classroom. The fourth article discusses the use of tape recording in teaching. The fifth article is designed to help the teacher plan, prepare, and utilize exhibits and bulletin boards. The sixth article makes clear how a teacher can develop and use a still-picture file. If the teacher prefers a kit of color slides, the seventh article tells how they may be made with inexpensive photographic materials. The last article discusses the future, with emphasis on integrating the various materials into a teaching program to improve the quality of instruction.

HOW THE FILM PROGRAM DEVELOPED AT ILLINOIS STATE NORMAL UNIVERSITY

C. L. Cross*

Motion pictures have been shown in Capen Auditorium at Illinois State Normal University for many years. Silent pictures were a regular feature in the auditorium when the writer came to the campus in the fall of 1925. These pictures continued to be shown until about 1930. By this time, sound motion pictures had become so popular that the silent pictures in Capen Auditorium were discontinued.

In the spring of 1933, two sound projectors were installed in the Auditorium on a trial basis. It was understood that the cost of these projectors would be taken from admission to the shows. As there was no theater in Normal at the time, this undertaking was an immediate success. The pictures proved so popular that there was a demand for student admission by activity ticket. Dr. R. G. Buzzard, now president at Eastern but then on the faculty at Illinois State Normal University, was the promoter for this change. Since the fall of 1933, motion pictures have received from thirty to fifty cents per student fee and the students have been admitted by activity ticket to the movies.

About fourteen pictures are shown each semester and six or seven each summer term. It is estimated that at least one thousand students see the campus shown movie each week end. Each picture is shown twice—at 4:00 p.m. on Fridays, and at 7:00 p.m. on Saturdays.

Most teachers colleges do not have motion pictures as a part of their extra-curricular activities. The author, however, has had the privilege of having been associated with two that do have such a program. While a student at Kansas State Teachers College in Emporia, the author served as the motion-picture operator when the program was started there in 1916. The Emporia program did not continue when sound pictures replaced the silent pictures. The University of Illinois now shows a number of the entertainment type of films. However, such showings have not yet become a regular feature there.

Sound pictures were started in Capen Auditorium with the hope that they might serve to finance a Visual-Education program at Illinois State Normal University. That this hope was realized is shown by the following data. By November, 1937, when the Normal Theater opened, the motion pictures shown in Capen Auditorium had paid for the two 35mm projectors used there. They had also paid for a 16mm classroom projector, two 35mm filmstrip projectors, a 3"x4" slide projector, two tripod screens, more than a dozen classroom films, about 150 slides of 3"x4" size, about 50 filmstrips, and a 35mm Leica camera.

Having the 35mm projectors enables special pictures to be shown which otherwise would not be available to the student body. The projectors have enabled special organizations to raise funds by sponsoring

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a special show. These organizations have thus been able to raise funds to carry out projects which, because of cost, would otherwise have been prohibitive.

It is also believed that the chief benefits of this program cannot be evaluated in dollars and cents. Although no active attempt has been made to teach motion-picture appreciation, undoubtedly some of this appreciation comes to the prospective teachers at Illinois State Normal University from seeing only the best in pictures. Many students come to the University from a rural and small-town background. Their knowledge of desirable motion pictures is at best limited. Students' picture experience here should make them better qualified to counsel high-school students about the selection of commendable motion pictures. The students should, too, be less provincial after having had this program in college. The pictures help to center the student life on the campus during the week end. The author believes that this tendency is an advantage to the students.

EDUCATIONAL FIELD TRIPS

ARTHUR W. WATTERSON*

If education is a means toward the adaptation and adjustment to society, then the more complex the society and its problems become, the more difficult becomes adult comprehension. Can the adolescent be other than bewildered? Perhaps a partial solution of the present dilemma in the education of the adolescent lies not in constant alteration of the curricula, but rather in the re-examination of the techniques already present in the methodology of education. One of these techniques, the field trip, has been employed down through the years with varying results. Often, field trips have not been recognized as a teaching device, or they have been ignored because of the extra effort involved in planning and execution. To date, field work in education has a checkered existence because of inadequate handling by many teachers.

There appears to be a close relationship between visual education and field-trip experiences. Both techniques have enjoyed periods of boom and misused employment. The unwise use of visual aids in education is well known and understood; but, fortunately, with the passage of time, many of the ills which have plagued visual education have largely been solved. But not so in the case of field-trip experiences. Since both techniques are methods of injecting realism into teaching, the wise employment of visual-aids and field-trip experiences can result only in richer educational experiences for students.

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There are many types of field trips. Field work, like visual education is not confined to any particular course of study but cuts across all disciplines. Of all types of field work, the spot field study is, by and large, the most successful and most widely used. Spot field studies are seldom of more than a few hours' duration and can be planned and executed by almost any teacher with the blessings of the school administration. The remaining types of field work—micro, reconnaissance, and field camps—are specialized types of field experiences that are usually not practicable and are far too complex in technique and execution to be of more than questionable value in the public-school systems.

All field trips begin with the instructor. Field-trip situations must be recognized by the teacher, must be planned for, and must be well executed. If the teacher fails to recognize field-trip possibilities, absence of field work that might profitably have been carried forward results. It may be said that field-trip possibilities are usually not recognized by teachers because they are unaware of what exists in their immediate communities. This ignorance of communities by teachers is a woeful and widespread condition that can be corrected only by the teachers themselves. Many teachers are unaware of the names of the streets on which they make their way to school daily; many more know nothing of the economy of the community. Often a teacher's knowledge of a community consists largely of the best-known cafes and restaurants, the location of bus and railroad stations and their respective schedules. Field trips and their resultant value in teaching have worth in direct proportion to the teacher's knowledge of the community in which he works. The students, however, should not be overlooked as sources of information in terms of preliminary knowledge of a given community.

The selection of a sight for field work should be made carefully. Projects selected for study should be examined for their practicality in terms of course value as well as in regard to the possibilities the site offers in integrating the experience with other courses the student might be pursuing. Far too many field trips are conducted with a blind adherence to a single discipline with little if any thought that the site under consideration is but a part of the whole of functioning society.

Planning the field trip is the most important aspect of field work except the selection of the project. Lack of adequate and careful planning can quickly reduce a field trip into organized mob activity and can lose to the teacher the vital element of leadership in field work. This leadership can be effectively maintained by careful planning in all phases of the proposed field project.

Academic and mechanical phases must also be considered in planning a field trip. The physical phases of planning involve chiefly transportation and other details incidental to site arrangements. Whether the class may be within walking distance or must be transported to the site, it should go as a group. Bus or streetcar arrangements should be made. Only under the strictest of supervision should

students be transported in automobiles. The advantages of group transportation are many: safety, opportunity to teach enroute, and simultaneous arrival at the site with the resultant saving of time in assembling. If a factory is to be visited, for example, the tour escort should be briefed in advance by the teacher as to precisely what is wanted. Such an arrangement will result in a great saving of time for both the escort and the class. Close observance of mechanical details will result in a smoothly functioning field trip, which will be much more conducive to learning than a disorganized venture.

The academic opportunities of arranging a field trip are many. A map exercise should be planned in connection with the proposed project. Since an appalling number of students can neither read nor interpret a map, every opportunity to rectify this condition should be seized upon by teachers. A field-trip exercise provides teaching opportunities which involve the trip as well as the site.

Students should be thoroughly acquainted with the project to be studied before they leave for the field. The importance of the technique of interviewing should not be overlooked. Preparation of the students in terms of asking concise and leading questions of the escort should be emphasized by the teacher. Too often a question-and-answer period between the escort and the students resolves itself into overemphasis of incidental materials that have little bearing on the significant facts at hand. The teacher must stand ready to limit the interview to immediate and well-defined objectives. The value of a class meeting following the field trip should be recognized. Valuable teaching opportunities are offered at the post field-trip class meeting. There questions can be discussed dealing with all facets of the experience, perhaps including questions which could not be asked or answered because of time limitation.

Opportunities for field trips are always present in all communities. Students are eager for field experiences and the responsibility for channeling this enthusiasm into desirable achievements rests with the teacher. An excess of field work must be avoided; the degree of field-work activity rests with the good judgment of the teacher. Teachers might well re-examine field-trip experiences as a technique in vitalizing education. To see is perhaps to understand.

RADIO: A PERCEPTUAL AID TO LEARNING

RUTH V. YATES*

Nine out of ten American families listen regularly to their radio. Only one out of twenty classrooms do likewise. Still, many educational programs are broadcast daily.

This question raised by Chester and Garrison in *Radio and Television* suggests another. Why is it that only one teacher in twenty makes use of this educational resource in school or out of school?

There are four reasons that teachers give when they are asked this question. The reasons given are: (1) the school lacks adequate radio equipment or the proper classroom facilities for listening; (2) the teachers do not know how to use it effectively; (3) the programs are not always adapted to the curricular needs, and the hours of the broadcast do not always coincide with the rigid schedule of the school subjects; and (4) the teachers do not know the available educational programs broadcast in school hours or during the rest of the listening day.

On the other hand, the teachers who do use radio report definite educational values they find in radio. Why do they utilize radio as a perceptual aid? Here are some of the values they have found:

It is timely. The need for timeliness is obvious in the study of current events. For instance, as pupils listen to selected newscasts and discuss crucial issues, they become increasingly aware of the problems they will meet as citizens. Timeliness is essential in vocational guidance programs. By radio, the teacher or guidance specialist and the students can be informed of continuous industrial changes and demands. Numerous interview programs bring outstanding people from different vocational fields to the microphone.

Radio can be an emotional force in the creation of desirable attitudes. In the process of democratic living, attitudes are important. One does not change his attitude toward a different social and cultural group by knowing facts. Emotional drives have a powerful influence. The radio uses drama and music, two potent forces for creating an emotional impact. The radio program presented during Brotherhood Week this winter is an example of such a force. The sincerity and emotional restraint of the narratives could not but result in a better understanding of the reasons why the majority group and the minorities behave as they do.

Radio can add authority. Teachers cannot know every phase of the subjects they teach. The appearance of an authority before the microphone on scientific, literary, or political subjects can be of assistance to a teacher. For instance, *Adventures in Science* (CBS, Saturday) with Watson Davis and his guests discussing new discoveries in

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specialized scientific fields should be and is utilized by many teachers. The WLS music program and the Magic Harp (Wednesday, 1:15) on the series *School Time* have been helpful to many grade school teachers who, without adequate training, are required to teach music.

Radio can be used to develop discrinmination.

> The critically minded are active, not passive, in their reception of the printed and spoken word or the motion picture. They constantly ask, Is it true? Where's your evidence? They search out hidden assumptions, unwaranted inferences . . . . They are our only hope for progress.[1]

Mr. Dale and others have demonstrated that, with continued selective exposure and follow-up analysis, it is possible to shift students from the active to the passive group. By first determining the present taste of their pupils, then by evaluating with them the program elements that make for quality, and finally by suggesting superior programs for home listening, teachers have helped students to become more selective in their radio listening and critical of what they hear. Surely active listeners for radio are needed in a democracy. Excellent music is available on the radio everywhere today. Is it that a discriminating public has demanded such music, or is it that listeners have learned to like the best music by listening to it over the radio? Who can say? But it is recognized that the *Firestone Hour,* the *Railroad Hour,* and the *New York Philharmonic* program are contributing much to the cultural life of America.

Radio brings sound into its own. Since the invention of the printing press, greater emphasis has been placed upon the eyes as the door to learning. This fact presents another important aspect of radio use that teachers point out. Not all children, however, read equally well; to some, sound is helpful. Dr. Grey of Columbia, in an address before the National Council of Teachers of English, made this comment regarding the teaching of literature:

> If the professional end we value is the literary experience, then won't we use every medium, whether in print, through radio speaker, or film, on a luminous T V Tube, or on the boards of a stage and be as clear-sighted as we can about the advantages and limitations of each, even though clear-sightedness might seem to imperil the long investment we have made in printed literature? The most important effect of radio with its dependence solely on voice, sound effects, and music seems to have been to make us intensely ear-minded once more, to balance our increasing eye-mindedness with print and film.[2]

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[1]Edgar Dale, "Discrimination," *News Letter,* Nov., 1936, p. 1.

[2]Lennox Grey, "Radio, A Means, Not an End," *English Journal,* March, 1951, p. 144.

Jack Lester's excellent talent as a story teller has made many of the best children's stories come alive for boys and girls on Saturday mornings at 8:45 on the program, *Carnival of Books* (NBC). There is, too, the perennial favorite, *Let's Pretend* (CBS), dramatized adaptations of fairy tales and original fantasies, to be heard on Saturday mornings at ten o'clock. For the older boy or girl, there is the *Theatre Guild* (NBC, Sunday, 7:30 p.m.). This program brings notable stage successes to those who probably will never see a Broadway stage production. Dramatizations and adaptations of stories and plays are to be found also on the *Lux Radio Theater* (CBS, Monday, 8 p.m.). *Stories to Remember, Best Short Stories,* and other literary programs are always a part of the year's broadcasts from WILL, the University of Illinois station.

These, then, are four values that the teachers who use radio have found. In spite of these values, they know that the realization of the desired results is dependent upon the teachers. What is learned from listening to a radio program in school or outside depends indubitably upon the objective the pupils and the teachers have for listening.

If a broadcast is being heard because of its timeliness, it is that aspect that will be emphasized in the preparation for the broadcast, the listening, and the follow-up. When the chief aim is to create desirable attitudes, it is upon the emotional aspect that teachers will focus attention. Teachers with this objective in mind will not follow the listening period with vocabulary drill or recall of facts. If the program is being listened to because it will add authority, however, then information is sought primarily. Teachers may use the program to challenge pre-conceived notions. In that case, the teachers must have a clear idea of the points of view shared by the class. After listening, the class may investigate to what extent their beliefs have been challenged. The writer recalls observing a social-science class in a Chicago junior high school listening to a broadcast that was concerned with racial prejudice. After the students had listened, it was obvious that the program had done little or nothing to change their beliefs and prejudices. The important learning experience was the discussion that followed. From listening together to an "impersonal radio visitor" this mixed social group was motivated to carry on a frank and unemotional discussion of the causes and results of some recent acts of prejudices they had in their school. Probably such a discussion could not have been stimulated by their teacher or any other more "personal" source.

If any teacher is one of the nineteen out of twenty who does not use radio but would like to test the values attributed to it by the one teacher who does, such a teacher may wisely affiliate with two organizations and read one book. The first organization suggested is the Federal Radio Education Committee, United States Office of Education, Washington 25, D.C. This committee was created to help the teacher find suitable educational programs and to send her suggestions

for utilizing them as a perceptual aid to learning. Every year Mrs. Gertrude Brodirick, head of this service, edits a list of recommended programs. It will be sent to any teacher upon request. The second organization that is ready to help is the Radio Council of the Illinois P.T.A. An interested teacher may want to get in touch with Mrs. Elizabeth Marshall, 228 N. LaSalle Street, Chicago, who is the State radio chairman. The book that teachers find most helpful is William B. Levenson's *Teaching Through Radio,* published by Rinehart & Company. Mr. Levenson is the directing supervisor of radio of the Board of Education of Cleveland, Ohio. What he has to say comes from years of experience in utilizing radio as a teacher and as an administrator. With the help and backing from these two organizations and the knowledge gained from Mr. Levenson's book, any teacher can begin to discover with the students the value of radio as a perceptual aid to learning.

CLASSROOM RECORDING

LESLIE M. ISTED*

Against a background of busy commerce for all ages of listeners and the industrial production of record players and recorders to match all budgets, it hardly seems surprising that the classroom teacher has become increasingly aware, within an almost incredibly short period of time, of the vitality and force with which sound-recorded experience has become a part of daily living, for child and adult alike. The introduction of non-breakable discs, automatic changers, and long-playing records has brought forth an exceedingly rapid expansion within an industry long shackled both by mechanical inconvenience and by expense. Even in radio communication, sound transcription of program material is now the rule rather than the exception.

Listening Readiness

As the dimensions of a controlled world of sound continue to increase, and as cultural and historic achievements in both music and speech are preserved with a fidelity and a reality that far outreach the methods of former times, it appears particularly significant for the teacher to recognize a situation that has not posed particular problems before. Children today enter the classroom with a far wider range and richer quality of auditory experience than they did a few years past. The active imagery that has resulted from extensive and varied contact with the entertaining sound and dramatic situations emanating from radio and phonograph has given the child a sensi-

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tivity to subtle shades of meanings inherent in tonal inflection to an extent that is often not realized by the teacher. Further, his responses to sound stimuli are spontaneous and varied because his experiences in this realm have been intense and vital. For these reasons, the teacher faces a challenge which, though not entirely new, has become specific and urgent.

Commercially Recorded Materials

Inexpensive disc recordings of dependable quality for use in the classroom are being made and widely distributed. Even the dime stores, news stands, and drug stores are offering for sale records that have great appeal for children, both in appearance and sound. Catalogues of the recording companies, now to be found in any record shop, show an extensive listing of titles in many fields: folk lore (musical and narrative), well known children's stories and fables, selections from literary works, significant historical speeches and events, and an array of musical recordings for all levels of taste. The visual format of these albums is often colorful and attractive. Particularly enticing to children are the illustrated folders and envelope containers, which present both printed narration and pictorial illustrations of the recorded material. The various series of music books used in music classes are available in recorded form to supplement music-reading activities. Many public libraries are discovering the great popularity of record albums to be loaned. Damage to the records is infrequent because of the unbreakable material on which the discs are pressed. It is not too fanciful to assume that both public and school libraries will find it necessary to become equipped with headset turntables where children and adults may select records to be borrowed. Twenty-three albums of music for children's listening, dancing, and creative-play activities, which have appeared under the RCA label for use in the elementary classroom, are provided with a teacher's manual. Other projects of this kind are in preparation.

Many types of recorded materials for classroom use are available on tape from distributing centers where materials, selected by the teacher from a list of many hundreds of titles, are "dubbed" onto the blank tape sent in. The Illinois center for distribution is at the University of Illinois. Classroom activities in conjunction with recorded materials may be interestingly worked out in dramatization and pantomime (*Til Eulenspiegel's Merry Pranks, Robin Hood, Dance Macabre*).

Record clubs, organized in much the same way as certain book clubs, have been established. In these clubs the child subscribes to a certain portion of the yearly output. The Children's Record Guild, for example, grades its materials as to levels of listening and provides an estimate of the ages for which a particular issue is best suited. Some recording companies such as Young People's Records specialize in records for children and maintain a well qualified educational staff. The major recording companies, RCA, Columbia, Decca, Cap-

ıtal and others, are organized for meeting the needs of the classroom teacher. Most commercial agencies serving this field are urgent in requesting suggestions from educators, who will, they hope, make increasing use of these materials.

In the journals of most of the education associations, NEA, IEA, and others, is to be found an Audio-Visual column, competently edited. Here the teacher finds reviews of new materials, as well as suggestions as to use. These are, of course, in addition to the notable publications, both textual and periodical, in the field of Audio-Visual education.

Live Recording in the Classroom

The effective direct recording of live sound in the classroom or elsewhere necessitates the recognition of certain definite requirements that limit spontaneity and impose certain formal restrictions on the performance. But in spite of both the mechanical and the acoustical limitations of the low- and medium-priced portable tape recorder, it is entirely possible that the classroom teacher may by this means find entirely new approaches to problems of learning. This assumes, of course, that the equipment will be used to its best advantage, *i.e.*, that it is not called upon to turn out a professional quality of recording except under highly favorable conditions.

There are certain specific techniques of operation that produce acceptable results. A brief summary of these requirements points to their classification under at least these headings: (1) microphone placement, (2) control of unwanted noise, and (3) adequate consideration of *unreal* aspects of amateur recording.

Microphone placement requires experimentation by the operator prior to actual recording in order for him to insure satisfactory results. One noted expert in the field recommends stopping one ear (thus simulating the monaural microphonic effect) and moving about the room during a rehearsal until the proper spot is found where sounds are in best balance. This technique requires, of course, that the participants in the recording will remain in one location and maintain comparatively little motion of the head while speaking.

The distance of a single voice from the microphone will vary from six inches to three or four feet, depending on voice strength. For this reason, it is necessary to place participants at varying distances to compensate for noticeable differences in loudness. Operating the recorder at a low level of the volume control while maintaining fairly strong signal strength insures the elimination of electronic noises within the recorder itself. These noises naturally become more prominent when the volume level is raised. A low recording volume and forceful signal give best results. The use of more than one microphone to compensate for varying signal strengths is technically complicated and not to be recommended except under the controlled conditions of a sound stage or radio studio with a trained technician as operator.

Recording in a highly reverberant room requires a closer microphone than recording in a room where sound is absorbed by upholstery, drapes, and sound-treated walls. Blackboards and plastered walls, that are highly reflective of sound and may introduce an unwanted liveness, require freak placement of the microphone. Sound-absorbent qualities are contributed by the clothing and bodies of the performers and observers. One adult is approximately equivalent to three and one-half square feet of free space such as an open window. For this reason, the more persons there are in the room, the more the sound will be absorbed.

A second problem, that of control of unwanted noise, must be reckoned with. Since a microphone is influenced by all sounds that impinge upon it, there is no easy way of selecting wanted sounds from a background of noise. For this reason, precautions must be taken for controlling the sound background. For example, one is usually surprised on play-back at hearing much sound to which he was not attending during the recording. Controls such as the use of rugs on the floor, the removal of shoes, and general avoidance of sound-producing movement during the recording session are effective. Obviously these controls introduce a certain amount of tension or lack of spontaneity to the situation unless the participants have become thoroughly habituated to maintaining these conditions. Usually noise control without tension can be secured by means of sufficient rehearsal. Again it should be mentioned that the recorder itself introduces unwanted noise and disturbance if it is operated at its highest volume level. Such operation obviously increases the prominence of background noise. Further, at such levels, it is highly susceptible to minute sounds that may be completely unheard by the participants.

The third problem in recording, the unnaturalness experienced in recording one's own voice, stems from two sources. The sound is being *heard* by a single microphone and hence lacks the dimension of depth that one experiences with two ears. The sound of the voice that is recorded comes to the microphone chiefly through air rather than by the usual familiar routes natural to hearing one's own voice. For these reasons, play-back reactions of disappointment or displeasure may be experienced unless children have been prepared for this effect. The objective nature of recorded sound may give emphasis also to faults of diction, breath sounds, and similar unduly prominent extraneous effects that usually pass unheard. There is, however, much to be gained from hearing the objective sound of one's own voice, divorced from facial expression, posture changes, and gestures. This is one of the chief methods used by radio announcers in correcting flaws in delivery, which would otherwise hamper their effectiveness.

Radio Transcription

By means of tape-recording the rich possibilities of radio materials are made available to the classroom at the convenience of class schedule. Most tape recorders are equipped with an auxiliary con-

nector that may be used for recording radio programs by wire. The two clips may be attached to the two wires leading to the cone at the back center of the radio speaker. This means of recording from radio is preferable to using the microphone, since acoustical distortions and room noises are thereby eliminated. The transcribing of radio programs is permitted by law, provided the material is to be used for educational purposes. Class listening, directed by means of visual cues (blackboard, chart, etc.), is likely to be highly effective when it has been pre-audited and edited.

The editing procedure for eliminating undesired portions of the recording is easily accomplished by splicing. Scotch splicing tape is suitable for this purpose. The splicing in of recorded comments and instructions is often desirable for clarifying the presentation of a tape recording. The point might be made here that instructions for these procedures are usually well outlined in the operator's manual furnished with the recorder. The techniques involved are not difficult to master, and the results may often be gratifying. Signal strength with relation to recording volume is as important with radio transcription as with live recording but is much more easily controlled since microphone problems and room distortions are cared for at the radio studio.

In connection with a consideration of use of sound materials in the classroom, it should be clearly stated that (1) the teacher must search for the ways in which this important medium of communication may be refined and expanded, and (2) the teacher must express whatever evaluative comments he may be prompted to make as a result of his experimentation in order that those who produce materials and equipment may be made conscious of their share in a great responsibility—that of forming the esthetic and cultural tastes of a nation.

PREPARATION OF BULLETIN BOARDS AND EXHIBITS

CECELIA H. PEIKERT*

Effective bulletin-board displays and exhibits of three-dimensional materials are among the most useful of the visual aids and also among the most easily procurable. They are seldom used to their utmost capacity for teaching purposes. Possibly this is due to a mistaken notion that it is too difficult to arrange a worthwhile, attractive display.

As with all other visual aids these two have specific purposes and should be used when no other aid serves so well. Bulletin boards usually, though not necessarily, make use of flat materials, although exhibits of objects are of course three-dimensional. Both, however,

* Director of Museums

tell an entire story of some particular topic if arranged properly. Their advantage, therefore, lies in the fact that the observer can look at and study an entire lay-out instead of seeing one part at a time with no opportunity for looking back and making comparisons. Three-dimensional objects furthermore present many additional advantages. To children there is nothing quite like the "real" thing; objects may not only be seen but felt, and sometimes smelled and tasted. The involvement of more than one or two senses in studying them will create a more lasting impression. With an object in hand there is no possibility of being misled regarding size, color, or shape, as so often happens with visual representations of the object. Details may be studied carefully, and movable parts, if any, may be set in motion.

When arranging bulletin boards and displays of other kinds one usually deals with four general groups of materials:

1. Flat, two-dimensional materials, such as pictures and clippings.
2. Models—reproductions of an actual object which may be the same size, smaller, or larger than the object itself.
3. Casts—exact reproductions of an actual object. The cast is made usually from plaster from the original, and then colored to look as much like the original as possible. Surface details are accurate; size and shape are exact. It is often much easier to secure casts and models than an object, which may be unique or expensive.
4. The actual object itself or a part of it. There is a certain atmosphere that the real object can create that no model or cast can duplicate. Sometimes, indeed, it is more economical to have the real thing. A real dried starfish, for example, will cost only a few cents but a model of this would cost many dollars.

As a means of dispelling the idea that such visual aids are difficult to set up, a few helpful hints will be given which may make the process easier. For any display, flat or three-dimensional, a process involving six steps may be followed.

1. Decide upon the idea to be presented. Each exhibit has a theme, whether it be "How to Plant Tomato Seeds," or "The Influence of Classical Art Upon Modern Silverware."
2. Write the story. This may necessitate only a skeleton outline, enumerating the steps or points that will be covered in the display.
3. Secure pictures or objects that are to be used. It must be decided where the story needs to be illustrated and the best materials for this purpose must be found.
4. Arrange materials, in proper order and also with due regard for an attractive appearance.
5. Write labels. Each object must be explained and general labels must make clear the theme being presented.
6. Add eye-catchers that will attract attention to the display.

Perhaps the fourth and sixth steps present the most difficulty to the novice. The question that ranks next to "Where do you get your ideas?" is "How do you know where to put things in a display?" In this respect, two or three hints on balance may be of help. Symmetrical balance may be achieved by choosing one object or picture that most nearly tells the entire story or that is the most interesting, most colorful, or most important, and by placing it in the center of the display space. All other materials are then divided into two equal groups. One group is arranged on either side of the center. However, balance may be achieved less formally if it is remembered that two small objects will balance a larger one placed on a higher level; that a large, less important item may be balanced by a smaller, more interesting one. Balanced displays, however, become monotonous if used constantly, and should be repeated only at intervals. After one has achieved a certain amount of facility in arranging displays, his eye will tell him when the arrangement is pleasing.

Making a display attractive is not difficult if one keeps in mind a few of the following points:

1. Do not crowd the materials. Though one is tempted to use everything he has, only enough should be used so it is shown off to good advantage. Never let material overlap or touch. A few items, well placed, and with sufficient space around them, will do a much better job and look more impressive than many that assume a cluttered appearance. That point is proved in the better stores that display only two or three items in a show window instead of the two or three dozen they might exhibit.

2. Hide the mechanics of display. Methods of attachment that detract from the appearance of a display should be avoided. Thumb tacks are a poor choice for attaching pictures. Common pins may be used on many backgrounds in such a way that they will neither mar the material held nor be apparent to the eye. They may be placed into the background as close to the item to be displayed as possible and then pushed away from it until only the head is holding it. When the background is too resistant for pins, the small, colored map tacks serve the same purpose.

3. Add color to the display. Since most bulletin boards and display spaces tend to have a neutral, uninteresting color used on them, it is necessary to add some color to liven the material. Selecting the colors will depend upon the materials being used. There must be contrast between the objects displayed and their background; the colors must not clash, but must enhance any color used against the background. With many pictures and objects it is possible to use for a background one of the minor colors present in the object itself. At times, one may wish to cover the entire display space with some one color. At other times, small bits of color will serve the purpose. This may be accomplished by adding strips of construction paper, ribbons,

bias seam tape, yarn, or corrugated paper. Textiles oftentimes make an excellent background, provided the proper type is used to set off the materials.

4. Use neat, legible lettering appropriate to the display. It is possible to purchase many letters that are commercially prepared that will serve most display purposes. Various types include the plaster-of-paris letters with sharp nails imbedded in their backs so that they may be pushed into the background; cardboard letters; and the gummed letters which are fixed to the background as postage stamps would be. However, it is possible to make attractive letters quite easily for special purposes. By using a book of alphabets and quarter inch squared paper, one may enlarge any letters he might select. These can then be cut from some material or used as patterns for tracing on the background. When making one's own letters, one can increase interest in a display by making the letters of various materials. There are substances other than paper and paint from which to create letters. Sheet cork, cloth, metallic paper, yarn, pipe cleaners, balsa strips, and corrugated paper are just a few examples of materials which may be used to advantage. Sometimes the subject matter of the display will give a hint as to what may be used. Popped corn was fastened to paper to form the main label for a display on the story of corn, and twine was used to label a display of knots for Boy-Scout work.

5. Add deliberately something which will catch the eye of the passerby. The pretty girls, the charming kittens, and the frolicking puppies which appear in advertisements for towels, ink, and cars have little or nothing to do with the product advertised. But they serve their purpose by catching the eye of the reader and making him pause long enough to take note of this product. Likewise with school displays it is sometimes necessary to catch the eye in order to make students take note of the materials displayed. Sometimes a spot of color, a curl of paper, some meaningless design, or the attractiveness of the background will accomplish this purpose.

6. Arrange the display in such a fashion as to create the proper atmosphere for the topic. If model airplanes are being displayed, the easiest thing to do would be to set them on shelves in the cases. This method of display does not help convey the desired idea however. In order to do that, one should remove all shelves and hang the planes from the ceiling on strings that are as nearly invisible as possible. To create further the illusion of their being in the air, one might add some background to suggest the sky and possibly arrange the planes in some formation suitable to their type. Color can often help create the atmosphere wanted. Certain colors are associated in the mind with certain occasions. Therefore, red and green are used for Christmas, black and orange for Hallowe'en; pastel shades, in springtime; and the warm colors, in the fall. Blues and greens are

the cool colors to be used with a display of ocean life or Alaskan materials. Bright reds, blues, and yellows would be appropriate with a display of Latin-American objects since one usually connects these countries with the gay, bright colors. Letters can also help create an atmosphere. At Christmas, Old-English letters seem most appropriate as they have the dignity suitable for the occasion. For a display of modern art, one might use the modern lower-case letters to advantage.

7. Select a background that will set off but not dominate the display. This is oftentimes very difficult to accomplish. The background must help mould the materials into a unit and must show them off to their best advantage. But it must stay in the background so well that one is hardly aware of it. The only exception to this is on the occasion when materials that are without color are being displayed. They would be so uninteresting in appearance that they would be passed up completely. In that case, it is permissible to use a background so bright or so compelling in some way that it will hit one in the eye and make him stop to look. Examples of such materials would be black and white cartoons, very old books, and like objects.

These are the basis rules for an effective display. If to these a dash of enthusiasm and imagination is added, one cannot fail to create visual aids that will make teaching a much more worthwhile and interesting procedure.

THE TEACHER AND GRAPHIC MATERIALS

C. H. KURTH*

Every teacher needs to be an Audio-Visual Director and operate his own Audio-Visual Department. This does not mean that he has the duties of the Audio-Visual Building Coordinator nor that he duplicates the job of the Audio-Visual Director of the school system. Wherever a school building or system has an organized audio-visual program headed by a coordinator or a director, the audio-visual program is centralized to a relatively high degree, but it never will be completely centralized, nor should it be. There is a segment of perceptual learning materials that should remain under the supervision and in the possession of the classroom teacher, where they are available to him at all times. This is particularly true of graphic materials—pictures, graphs, maps, charts, posters, diagrams, illustrations, cartoons, and paste-ups.

The core of the teacher's audio-visual program is his still-picture file. It is a sad commentary on the teaching profession that there are all

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too many teachers who fail to realize the educational potentialities of a still-picture file. This file serves as a ready source of material for bulletin-board displays, posters, and illustrations of current lessons. Lantern slides can be made by tracing pertinent pictures on etched glass. The pictures can serve as models for the students during art activities; they can be used to motivate students during language-arts periods. For the teacher lacking in artistic ability, pictures and an opaque projector can reduce the artistic element to a mechanical process. These are but a few of the uses of a still-picture file. There is absolutely no substitute for the teacher's still-picture file.

The basic ingredient for a picture file is, of course, still pictures. These can be obtained from innumerable sources. Fifty cents sent to Box 369, Riverside, California, will bring the teacher *Sources of Free Pictures* by Bruce Miller. This twenty-eight page booklet lists alphabetically by subject the sources from which pictures can be had for the asking. Another excellent directory of sources of pictures, pamphlets, and graphic materials of all kinds is the booklet *Free and Inexpensive Learning Materials.* This publication is compiled by the Division of Surveys and Field Services, George Peabody College for Teachers, Nashville, Tennessee, and also costs fifty cents.

Although the aforementioned publications are useful and valuable, they are not essential for the building of a picture file. Many other sources of pictures are at the teacher's command. He may ask his pupils to bring to class outdated magazines that contain pictures. This can be a continuous project throughout the school year. Pictures from calendars and newspapers are also of value. The alert teacher will notice in the professional magazines he reads announcements of new materials that are available free, or at a nominal cost. These announcements usually appear as a regular feature and are listed under such headings as "Yours for the Asking" or "New Materials." It is wise to act as soon as possible on such information because in most cases the supply is limited and soon depleted.

Some teachers prefer to select and clip all of the pictures themselves, but others allow students to help them. Either method is satisfactory. The teacher who is in the beginning stages of building a picture file will be much less selective than the teacher who has 5,000 or more pictures in his collection. A picture file is not developed in a month or a year. Instead, it needs to be nourished and cared for continuously. Many of the pictures selected at the beginning of the collection will be replaced later by better pictures. For example, a teacher may decide at the outset to keep a black-and-white picture of a red-headed woodpecker; later on, he may discard this picture for a colored drawing that he finds. Still later he may find a colored photograph of the red-headed woodpecker in *National Geographic.* Since the photograph is superior to the pictures in the file, both pictures may be kept, but if he is pressed for space, he may discard the colored drawing. Thus the teacher's picture file is an ever growing and changing source of teaching materials.

Pictures should be properly filed. If the teacher does not have a file cabinet, a makeshift file drawer can be had by using a corrugated paper box similar in size to a file drawer. The pictures can be filed in ordinary manila folders. Most teachers prefer to file pictures by subject. For example, in the beginning stages all pictures of animals can be filed in the folder "ANIMALS." As the file grows and this folder can no longer hold all of the animal pictures, the teacher will look through the folder to discover which animals are predominantly represented. Perhaps there is a large number of dog pictures. This, then, is the cue to start another folder indexed "ANIMALS—DOGS." If this folder ever becomes too full, it again may be subdivided; a predominance of collie pictures would result in the addition of a folder "ANIMALS—DOGS—COLLIES." Thus a file may contain folders in the following order:

ANIMALS
ANIMALS—DOGS
ANIMALS—DOGS—COLLIES
ANIMALS—DOGS—TERRIERS
ANIMALS—HORSES
ANIMALS—HORSES—PINTOS

This filing system which utilizes broad subject areas and necessary subdivisions permits maximum ease in expanding the collection and also permits the number of major subject areas to remain constant.

The teacher who maintains his own picture file will also have to answer the ever-present question, "To mount or not to mount?" Mounted pictures have the advantage of resistance to the wear of handling, insuring greater life to the pictures. Pictures which are to be handled often by children can be further protected by a coating of wax, lacquer, or plastic. Mounting also holds the picture flat for ease in handling or reading or for use in the opaque projector. However, mounting a picture takes time and added materials. A mounted picture needs more storage space, and the use of a mounted picture is somewhat limited since it can be used only in its mounting.

When setting up a picture file, the teacher should decide whether he alone will have access to the file, whether the students will have free access to it also, or whether he will maintain two files—the one a professional file of the best pictures that he wants so save year after year, and the other a file for the students' use. The maintenance of two files seems to be the most reasonable solution since it gives the students the opportunity to work freely with pictures and yet maintains a safeguard for the teacher's more valuable collection. The children's file should be the larger of the two.

Students who are called upon to give reports to the class should feel free to use whatever pictures are available for illustrations. If the students need to make posters, they should be able to select from the file those pictures that they can use. Students who are responsible for bulletin-board displays should be encouraged to use the picture file.

In short, the students should feel free to use the pictures in the file any time they feel the need for them.

Thus far, pictures and the still-picture file have been considered only in a general way. It may be well now to consider some specific applications to the area of graphics.

A fifth-grade teacher wants to make a products map of the United States. There are several ways that he can do this without artistic ability, provided he has a good still-picture file. First of all, the size of the map and type of materials must be determined. One may assume that the teacher has a piece of cardboard, 28"x36" to use for this purpose. The next step is the selection from the picture file of a suitable map of the United States, which is then placed in the opaque projector and focused on the cardboard that has been mounted on the chalk board, wall, or bulletin board. When the opaque projector is moved closer to or farther from the cardboard, the projected image becomes smaller or larger and thus the desired size of the image can be obtained. The teacher needs but to trace the outline of the country and each of the states in the projected image on the cardboard, to obtain an accurate reproduction. The next step is to get the products on the map. If the teacher has adequate pictures of the various products in his file, he may wish to cut the pictures out and paste them on the map at the appropriate places. The difficulty there is that the pictures may not be the correct sizes—the ear of corn for Iowa may be much larger than the cow for Wisconsin or the Douglas fir for the Pacific Northwest. In order to overcome size discrepancies, one may use the opaque projector again to focus the pictures on the map in the desired sizes. The projection-tracing method thus permits adjustment in the size of the projected image that can compensate for size differences in the original pictures.

It is realized that the production of graphic materials is time consuming, but the finished product is a tailor-made teaching tool that fills the particular need of a particular teacher and is not available from any other source. Since the process of producing the products map by the projection-tracing method is mechanical rather than artistic, it is possible that the pupils could do this project under the direction of the teacher. In fact, it is probably desirable that the pupils make the map because it is a more profitable learning experience for the children to have an active part in the construction of the map than to sit passively and look at the finished product.

By using the method just described, biology teachers can have tailor-made illustrations of the digestive system of a frog; the social studies teacher can have tailor-made diagrams of a particular political organization; the commercial teacher can have a poster-size set of particular business forms; and other teachers can have similar enlarged graphic materials appropriate for their specific needs.

The teacher with a complete picture file will have little difficulty in making posters. He may wish to combine several pictures as one. For example, he may have a large picture of a tree and several small

pictures of birds. The latter may be cut out and mounted in appropriate places in the large picture—the red-headed woodpecker on the trunk of the tree; the robin, bluebird, cardinal, and blue jay scattered throughout the foliage, on the ground or in the air.

If the teacher has difficulty in doing a creditable job of printing, he may purchase a commercial stencil set. This necessitates having separate sets for various size letters. However, he may buy one set which, with the aid of the opaque projector, will produce any size letters. A less expensive method is to use newspaper headlines as a source of letters. The letters should be roughly cut apart and filed in an "alphabet pool." When letters are needed, they are drawn from this pool, mounted on cardboard to make the proper captions, placed in the opaque projector, and focused on the poster, where they can be traced after the adjustments have been made for proper size and placement. If a straight-line caption is desired, it is easier to type the caption on a card and project this to the desired location on the poster with the opaque projector.

The methods discussed in this article are especially for (1) those teachers who do not make any of their own graphic materials because they feel the lack of artistic ability, and (2) those teachers with or without artistic ability who have little time to make graphic materials themselves yet hesitate to let the students make them because of their questionable artistic ability. The article has shown that the artistic processes of making graphic materials can be converted if necessary to mechanical processes; that a comprehensive picture file is indispensable to the teacher in his use of graphic materials; and that little reason exists for teachers to depend solely on commercially produced materials. Teachers can easily produce their own graphic materials exactly as they want them.

The realm of graphic materials is truly the individual teacher's own audio-visual department. As a teacher, are you effectively directing this department? Are you making the best possible use of the many teaching tools that lie within your reach as graphic materials?

THE PRODUCTION OF COLOR SLIDES FOR CLASSROOM USE

NELSON SMITH*

Teachers today are beginning to realize that a knowledge of copying techniques is valuable in many respects. The ability to produce and use 2 by 2 (2 inches by 2 inches) color slides for classroom instructional purposes is a skill that can be developed by a person who has the right kind of equipment available and the time, patience, and attention to detail that are necessary to obtain satisfactory results.

Almost all teachers have a wide assortment of materials that are used in connections with lectures and demonstrations of all kinds. This material may range in size from a postage stamp to a large wall map. The question of how to make the most of the material that is available is an important one that can be answered by the proper use of 2 by 2 slides made from 35 mm film.

Storage of all kinds of illustrative materials is the first problem. For large items, the teacher must have access to large filing drawers, which are seldom available, or he will have to fold the materials in a manner that mars the appearance. Small items can be easily stored but illustrations that are 8½x11 inches or smaller make it difficult for all members of the class to see the material at the same time. Photographs, charts, and graphs come under this classification.

The making of 2 by 2 slides can conquer both of these handicaps in the use of visual illustrative materials. The teacher can then make much more effective use of what previously might have been well selected illustrative material but had become ineffective because of the method of presentation. The slide can be made and projected to a classroom screen that gives everyone in the room a chance to see the presentation at the same time.

Slides offer many opportunities to the teacher. Slides make possible the maximum of brilliance in the projected image as compared with other projection-type aids. This advantage makes it possible to use slides in a room that cannot be darkened thoroughly. Since many teachers feel that commercial filmstrips or slide sets do not adequately meet specific needs, the production of 2 by 2 slides from materials that the teacher has collected over a period of years places a better variety of teaching aids and materials at the disposal of the teacher. Photographs taken in the home, school, or local community with a 35 mm camera can be made into slides that fit the need of the lesson or idea to be presented.

The production of 2 by 2 slides does not require elaborate apparatus that is beyond the budget of most schools. The teacher usually will find that equipment already owned by the school can be adapted to this type of work. A wide variety of cameras, enlargers, and

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accessories will be applicable to the technique to be described in this article. In each phase of the general preparatory work for 2 by 2 slide production on a non-professional basis - equipment selection, placement of lighting, material to be copied, camera alignment, and exposure determination - are to be considered. All of these steps can be mastered by the teacher who is willing to work carefully and to follow directions.

Equipment. The choice of equipment depends upon the quality and amount of work that is to be done. A "set up" for copying ranges from a simple camera and enlarger stand to the elaborate specialized apparatus manufactured for large-volume production. Copy equipment, in addition to the camera, includes an easel to hold the material to be copied, a lighting arrangement that will give even illumniation, and some provision for aligning the camera to obtain critical focus.

The equipment can be arranged to take either horizontal or vertical pictures. A horizontal arrangement lends itself to the handling of large-sized materials such as maps, but a vertical set up is preferred for the copying of materials of the same size up to about 16 by 20 inches. There are on the market today two desirable units designed for amateur production of 2 by 2 slides. If any amount of slide production or general copy work is anticipated, one of the units to be described would be a wise investment.

The Leica Focaslide is recommended if the school owns or has access to any model of a Leica camera. The Focaslide consists of two parts—the slider and the base. The lens is removed from the camera and attached to the base while the camera is secured to the slider by means of a retaining ring. Accurate composing and focusing are done on the ground glass of the camera. Exactly what is seen on the ground glass will be recorded on the film when the slider is pushed over to place the camera above the lens in photographing position. Operation of this unit is quick and simple. The unit can be used either on a tripod or attached to the upright and baseboard of a Leitz enlarger with a sliding arm. The Focaslide unit alone as it would be used on a tripod costs $45.88 at the present time. Naturally this cost does not include the camera. The complete outfit including Focaslide, upright, and baseboard will vary from $96 to $150, less the camera. A Leica camera will cost from $300 to $500 new. A local Leica dealer or E. Leitz, Inc., 304 Hudson St., New York 13, N. Y., will supply the interested teacher with more information about this unit.

Another unit that is more within the range of an individual teacher's budget is the Speed-O-Copy, manufactured by the D. Paul Shull Co., 240 S. Union Ave., Los Angeles 26, California. Unlike the preceding unit, that will fit only the Leica cameras, this device will fit any of the folowing cameras: Kodak Ektra, Leica, Contax, Kardon, Clarus, Argus 21, C2, C3, and Perfex. The Speed-O-Copy may be used on any tilting-head tripod, or on the column of the Shull baseboard and upright, the Leica enlarger or the Contax enlarger in conjunction

with the sliding arm made for that purpose. With this unit, the camera is attached in much the same way as the Focaslide. The camera is locked into position on the camera plate. The lens is screwed or bayoneted into the lens plate. The whole assembly is then attached to the tripod or to the sliding arm of the copy stand. In operation, the ground glass is folded out of position and the camera is folded into position for the exposure. The unit is very simple, quick, and accurate. It costs $70, without the camera.

Various enlargers such as the Kodak Precision Enlarger B and the Kodak Flurolite, although intended primarily for enlarging, are so designed that with the addition and rearrangement of parts they can be converted into an efficient copying unit. The cost of this conversion will vary from $50 to $100, depending upon what equipment is already owned. Any photographic dealer will be glad to help a teacher with information concerning the cost and method of adapting equipment that is already owned.

Certain 35 mm roll film cameras not adaptable to one of the preceding units and not having ground-glass focusing, although not as well suited for the making of 2 by 2 slides, can be used with supplementary lenses and with the technique described in the Kodak Data Book under the heading of "Copying". This book may be secured in almost any camera store.

Lighting. The object to be photographed is placed on the base of the copying stand and properly illuminated with the light spread evenly over the entire surface. Uniformity in the illumination of the material to be copied is accomplished by placing identical lamps in the same relative positions on two opposite sides of the copy board. The copy lamps should be placed so that the light strikes the copy board at an angle of 45 degrees in order to eliminate glare and reflection.

General Procedure. A photo-electric exposure meter is of value in checking the evenness of illumination. By placing a matte-surface neutral card in front of the subject and scanning it with a meter, one will find it possible to see any unevenness in the lighting by the variations of the needle of the meter. Care should be taken that the shadow of the meter does not fall on the card and interfere with the proper reading of the light value. The copying apparatus is moved up or down until the image approximately fills the ground-glass screen. Fine focusing is obtained by using the focusing mount on the lens after the lens has been put in a "near focus" position by sliding the lens up or down in the lens holder. When perfect focus has been secured on the ground glass, the camera is moved into position ready for the exposure.

It is possible to photograph objects with a minimum area of 4 by 6 inches simply by moving the lens mount in or out and setting the camera in proper position. However, in order to secure proper

focus when photographing smaller objects, one must move the lens further from the plane of the film in order that the image distance may be greater. This is accomplished by means of extension tubes. For example, in using the 30 mm tube (the measurement refers to the length of the tube), the user obtains a natural-sized image. Tables are available to help determine the length of tube necessary and to help compute the proper exposure.

After the camera has been focused and moved into position, it is necessary to determine the correct time exposure. The Kodak Neutral Test Card is recommended for use in determining the exposure for either color or black-and-white film. The test card (white side up) is placed over the material to be copied and a light reading is taken from this surface with a meter. The light reading, or the exposure index of the film being used, should then be divided by five before determining the proper lens opening and shutter speed.

The calculated exposure should be decreased by one-half of a lens stop if the subject is unusually light or increased by one-half of a stop if the subject is unusually dark. The "white-card" method gives an accurate exposure when the lens is in a normal position, but it does not when extension tubes are used. When using extension tubes, find the correct exposure for the lens in the normal position after the lens has been stopped down. Then this exposure time should be multiplied by the exposure factor given in the tables accompanying the various copying units. A folder with a complete discussion of the Kodak Neutral Test Card technique may be had by writing Eastman Kodak Co., Sales and Service Division, Rochester 4, New York.

The cost of the 35mm film necessary for making slides is an important consideration. For 2 by 2 slides in color mounted ready to project the cost is 18 cents each at the present time. This includes the cost of film, processing, and mounting in a form that is ready to use in a slide projector.

By following the directions specified in this article, many teachers have been able to make 2 by 2 slides that have been used to supplement commercially prepared slides and to overcome the problems of storage, instant observation, ease of handling, durability, and flexibility that often prohibit the use of illustrative materials in the class room. The author will be glad to give more complete information to any persons who are interested in making slides for educational purposes.

UTILIZATION OF INSTRUCTIONAL MATERIALS

MURRAY LINCOLN MILLER*

In complex modern society, no teacher is able to teach enough to encompass everything the young learner needs to know. The scope of education is too great. Although teachers have always tried to make instruction realistic, they have had to accept limitations. They have not had the means necessary for developing intricate concepts with accuracy and clarity. During the past two decades this situation has changed. The means are now available to overcome most of the limitations of learning. The only task that remains to be done is to put these new materials and methods to work in the schools.

Every profession is introducing new instruments, new devices, and new methods to step up efficiency. Teachers may now have the necessary materials, if they are provided, to produce educational outcomes on a scale never before considered possible. In those few places where schools are regarded as "baby-sitting" institutions to watch over the young until they are old enough to get married or go to work, efficiency in the production of educational outcomes is of minor importance. However, if the job of the school is regarded as teaching in order to develop highly competent citizens in a democratic society, then efficiency in the school seems paramount; it is more important to have efficiency in the school than to have it on the farm or in the factory. The most important "crop" society produces is its educated young people.

Any teacher who has an administrator with a profound understanding of the psychology of learning will find this administrator eager to promote the use of instructional materials. The administrator will try hard to find money to finance a program. The cost of instructional materials should be about four per cent of the total educational cost. In spite of this small proportion of the total cost, these materials are like a catalyst in that they greatly speed up and improve the learning process. For a four per cent expenditure one can often obtain up to a 40 per cent increase in educational outcomes.

It might be well to analyze some of the common types of instructional material:

1. Textbooks, reference books, periodicals, study guides, outlines, syllabi, seat maps, workbooks, flash cards, clippings, diagrams, schematics, drawings, charts, albums, scrap books, portfolios, bulletin boards, wall charts, posters, wall maps, and other materials to be read. The last named include the chalkboard.
2. Flat pictures, photographs, illustrations, prints, postcards, cartoons.
3. Exhibits, collections, samples, relics, objects, miniatures, mock-

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ups, dioramas, sand tables, apparatus, and materials seen on field trips.

4. Classroom radio, record player, records, transcriptions, tape recorder, television.
5. Films, filmstrips, lantern slides, color slides, transparencies, micro-slides.
6. Projectors: motion picture, filmstrip, slide, overhead writing, opaque, micro.

It may be noted that printed materials, flat pictures, and objects do not require any mechanical device for viewing. The only limit to the use of these materials is the effort the teacher makes and, to some extent, the availability. The expense is small. The audio aids require electronic devices, but the room does not need to be darkened. The projected aids require semi-darkness for slides and overhead writing or darkness for other types of projection. The value derived from projected aids is so great that the extra expense and trouble required are usually amply justified.

Classroom teachers should ask themselves two questions in connection with the use of instructional materials previously mentioned:

1. Have I assumed responsibility for collecting, filing, and correlating with my course of study printed materials, pictures, and exhibits? Have I planned for similar correlation and utilization of audio and projected materials, especially tapes, films, and filmstrips?
2. Am I making maximum use of instructional materials in order to obtain the greatest educational benefit? Am I providing my students with enriched experience to increase information and develop desirable attitudes?

The most common learning aid is the textbook. Modern texts are larger, better illustrated, more hygienically printed, and better organized than ever before. A strictly logical organization in a book may delineate all ramifications of the subject in proper proportion, but such organization seldom appeals to the reader. The psychologically organized textbook is designed for learning purposes, and has a high interest appeal. It motivates, stimulates, and makes the material more meaningful. The effective textbook has references, questions, suggested activities, and lists of correlated learning aids.

Supplementary printed aids that are found in the school library are the next most common materials. These aids are important because of their range of subject matter and thei ravailability. The classroom library is important, because it is under the immediate direction of the classroom teacher. These aids are useful to the extent that they contribute to the objectives of instruction. Teachers should acquaint themselves with readability formulas and use them to reinforce their own judgment about vocabulary and interest factors. Written material that contains significant content is often of little value because it is written

for adult understanding. As a result, children are unable to extract the meaning.

Most teachers are skillful in the use of textbooks and reference books, but they use few supplementary aids. These aids require careful planning. This is particularly true of those that are locally produced and that must be prepared in advance. Some locally produced materials may be prepared by the teacher and others may be produced by students as student activities or projects. Materials may be used to introduce a subject, provide supplementary information, or summarize. Pictures and clippings are often used for bulletin boards or opaque projection as described in previous articles in this publication. Exhibits are either brought into the school or the students are taken out on a school journey to see the exhibits. The main thing to remember about an exhibit is that students should be allowed to study the exhibit for as long a time as students seem to be profiting from it and the objectives of the course are being met.

The same principle applies to audio aids. The audio aid has only one dimension, but for certain types of information, sound is the important dimension. These aids should be planned rather than introduced as a surprise. The teacher should explain the purpose of the audio lesson in detail, stimulating students to do active listening, to formulate questions, and to engage in further learning activity. The same principles apply to audio aids that apply to visual projected aids since both are ordinarily used with groups of students.

Operation and educational utilization of the numerous types of supplementary aids that involve instruments cannot be described in the space available. A teacher who wishes to secure this information will find that enrollment in an appropriate university course is a quick and effective way to acquire the necessary skills and information. Projectors are much simpler to operate than most people imagine. Methods of utilization involve merely the application of learning theory. Although most teachers are well grounded in educational psychology, a few suggestions might be offered:

1. A supplementary aid should be made so much a part of the study program and be so carefully introduced and taught that it will cause no special excitement among the students.
2. Care should be taken that the room is sufficiently darkened, that the screen is large enough and high enough, that the room has ample ventilation, and that the equipment is in proper condition, when projectional instruments are used.
3. Students should be trained to operate the projector so that the teacher will be able to devote his attention to teaching.
4. Plenty of time should be allowed for discussion, debate, questions, explanations, and suggestions for further study after the film has been shown.
5. Any aid should be projected a second time if there is general

agreement that all of the ideas were not grasped on the first showing and that the class can profit from a second showing.

Utilization of supplementary aids is much more easily accomplished if the classroom has been designed with opaque blinds or drapes, a large projection screen, base-plug electric outlets, shelves and cabinets, sliding bulletin-board panels, tables, exhibit cases, recessed lights with selective switches, and acoustic tile. Architects are rendering a great service by designing school buildings with extra large classrooms, folding partitions, and central sound wiring. Some classrooms can be re-designed without much difficulty.

The advantages of using supplementary learning aids are great. Although they do not reduce the teacher's job, they do make his efforts more effective. Some of the advantages of supplementary learning materials are:

1. They have a high degree of interest for the students.
2. They supply a concrete basis for thinking and the extension of ideas.
3. They provide a reality of experience that stimulates students to self-realization.
4. They develop continuity as well as scope of thought.
5. They enrich meaning and thus aid vocabulary development.
6. They contribute to the efficiency, depth, and variety of learning.
7. They make learning more permanent.

PROFESSIONAL ACTIVITIES OF THE FACULTY

Dr. Donald Ries, associate professor of biological science, was elected chairman, on February 18, of the McLean County Chapter of the National Foundation for Infantile Paralysis. On March 11, Dr. Ries lectured to the Bloomington Women's Club on "Wild Flower Gardens." On April 23, he talked at an assembly program in Mason City High School on "Conservation."

Dr. Claude Dillinger, associate professor of psychology, had a paper accepted for the program of the Midwestern Psychological Association meeting held in Cleveland, April 25-26. He attended the meeting and read his paper entitled "The Relation of Socioeconomic Status to Intelligence."

Dr. Margaret M. Duncan, assistant professor of health and physical education, attended the Midwest Convention of the American Association for Health, Physical Education and Recreation, in Cincinnati, Ohio, on March 17-19. Dr. Duncan also attended the National Convention of the same organization in Los Angeles, April 6-10.

Will C. Headley, instructor in music, gave a sonata recital with Irwin Spector, violinist, on March 27 and a two piano recital with Perry Hackett on May 22, both over Station WJBC. Mr. Headley gave his own piano recital in Capen Auditorium on April 16.

Eleanor W. Welch, director of libraries, talked on May 15 at the regional meeting of librarians at Macomb. She attended the dedication of the new library at Northern State College on May 18.

Dr. Bernice Cooper, professor of health and physical education, attended the following conferences or conventions: on March 14-16, the Midwest Association of College Teachers of Physical Education for Women, at McCormick's Creek State Park, Indiana; on March 17-20, the Midwest Association of Health, Physical Education and Recreation, in Cincinnati, Ohio; on April 7-10, the American Association of Health, Physical Education and Recreation, in Los Angeles, California; and in May, the Association for Professional Preparation in Health, Physical Education and Recreation, in Allerton Park, Illinois.

Dr. Florence E. Teager, professor of English, spoke at the Woman's Club in Gilman, Illinois, on April 22, on the subject "Club Activities of British Women." Dr. Teager gave a talk, "England's Way," at the Aurora-Elgin Alumni Club on May 21.

Dr. Glenn J. Taylor, professor of speech, gave a report entitled "Recent Developments in Audiometric Testing," at the annual convention of the Central States Speech Association in Tulsa, Oklahoma, April 18.

Dr. Lucy Lucile Tasher, associate professor of social science, was a speaker on "Social Science from the Elementary School through the Secondary School with Special Attention to American Life and Institutions" at the Maine Township High-School Institute Day on March 17.

Dr. Gwen Smith, associate professor of health and physical education, as National Chairman of the Women's Basketball Rules Committee, spoke on "Current Problems in Women's Basketball," at the National Section on Women's Athletics meeting in Cincinnati, Ohio, March 17-19. This meeting was held as a part of the Midwest Convention for Health, Physical Education and Recreation.

Eunice Speer, assistant professor and assistant librarian, participated in the Vocational Guidance Day Program at Normal Community High School on

February 22. She recently reviewed Jean Gould's "Sidney Hillman" for the *Library Journal.*

Dr. Chris A. De Young, professor of education, is listed in *Who's Who in America* (1952 edition). Dr. De Young recently addressed several out-of-town groups, including the following: Parent-Teacher Association on March 10 at Washburn, on March 11 at Minier, and on April 21 at Onarga; Illinois State Normal University Alumni Clubs at Pontiac, March 25, and at Springfield, April 1; an International Relations Club at Fairbury, March 21; The Century Club at Holland, Michigan, April 9; the Bloomington Presbyterial at Clinton, April 15; the Community Club at LeRoy, May 13; and Commencement exercises at Danvers, May 23, and at Varna, May 27.

Dr. Herbert R. Hiett, Grace Hiler, Dr. Florence E. Teager, Dr. Dale B. Vetter, and Lela Winegarner attended the Fourth Annual Midwestern English Conference at Michigan City, Indiana, on April 18-19. Miss Winegarner served as a member of the executive committee.

Perry Hackett, instructor of music, gave a speech on April 2 entitled "Singing America" for the Mason City, Illinois, High-School assembly. He gave a joint recital on the entertainment board series with Miss Isabelle Terrill on Thursday evening, May 27, in Capen Auditorium. Mr. Hackett was a judge at the state finals of the Illinois High-School Piano Contest (class AA-A) at the University of Illinois on April 25. He was also a judge at the finals of the Wisconsin High-School Music Association (piano division) held at the University of Wisconsin in Madison, on May 10.

Dr. Bernice Frey, associate professor of health and physical education, was recently elected secretary of the Midwest Association of College Teachers of Physical Education for Women. This association draws its membership from colleges in five states—Ohio, West Virginia, Wisconsin, Indiana, and Illinois. The spring meeting was held March 14-16 at McCormick's Creek State Park, Spencer, Indiana. She served as chairman for a Special Interest Group Section meeting at this convention.

Elizabeth Russell, assistant professor of education, attended the meeting of the Illinois Association of Supervisors of Student Teaching in Evanston, March 22. She is secretary and treasurer of this organization.

Dr. Howard Reed, associate professor of industrial arts, attended the Thirty-eighth Annual Meeting of the American Association of University Professors in Philadelphia, Pennsylvania. Dr. Clyde McCormick, professor of mathematics, also went as a delegate to this meeting.

Lillie M. Rickman, assistant professor and supervising teacher of the partially sighted, served on the oral tests board for teachers for the State School for the Blind, Jacksonville, Illinois, March 14 and 15.

Dr. Vernon Replogle, principal of Metcalf Elementary School, was a consultant at a junior high school conference in the Newer Teaching Method Section at Champaign on March 28-29.

Dr. Stanley K. Norton, assistant dean of men, spoke to the Parent Teacher Association at El Paso on the subject, "Attacks Upon the Public Schools," on February 12.

Dr. Clifford Mills, head of the department of mathematics, lectured on March 17 at the Teachers Institute at Park Ridge, Illinois, on "Teaching of Elementary and Secondary Mathematics."

Dr. William R. Lueck, associate professor of education, on May 30 delivered the Commencement Address at Long Point, Illinois.

Charlotte Ives, instructor in biological science, attended the annual meeting of the Illinois Public Health Association at Springfield, Illinois, on April 3 and 4, and the annual meeting of the Middle States Public Health Association at Milwaukee, Wisconsin, April 7-9.

Dr. F. Louis Hoover, director of the division of art education, gave a lecture entitled, "The Art Experience and Individual Growth" on March 15, at the Missouri Art Education Association, Columbia, Missouri. On April 25 he gave another lecture entitled, "Teaching Art in the High School: An Everyday Adventure," at the High School Art Conference sponsored by the University of Iowa, Iowa City.

Robert Hammond, assistant professor of industrial arts, gave a talk before a section meeting at the Illinois Vocational Association Convention on "Place of the Arts and Crafts in Adult Education," on April 4, in Chicago.

Dr. Gertrude M. Hall, director of publicity, is the author of an article appearing in the March issue of *Illinois Education* entitled "More Cooperation, or a State Board for All Education Needed." She attended the national College Public Relations Association meeting in Cleveland, Ohio, April 16-19.

Dr. Edna M. Gueffroy, associate professor of geography, gave an illustrated lecture on "Western National Parks and Monuments" at the New Holland Parent Teacher Association, April 14.

Malinda Garton, instructor and supervising teacher for the mentally retarded, intermediate, wrote an article entitled "Emotional Release Through Painting" for the April *American Childhood*.

Alice Ebel, assistant professor of social science, accompanied her Municipal Problems 252 class on March 14 to Mattoon High School to visit a social-studies class there, the members of which were studying the council-manager form of city government. Miss Ebel's class presented to an assembly a panel discussion on the commission and council-manager forms of city government.

Zora Cernich, assistant professor of health and physical education, attended the Convention of the Midwest Association of College Teachers of Physical Education at McCormick's Creek State Park, Indiana, on March 14-16. She attended the Midwest Section Convention of the American Association of Health, Physical Education and Recreation in Cincinnati, March 17-20. Miss Cernich's students of folk and social dance gave an assembly program at Mason City High School, March 26, on "The American Folk Dance."

Dr. Emma Knudson, director of the division of music education, was guest conductor for the McLean County Music Festival Chorus on March 28, and for the Valley Music Festival, Cambridge, Illinois, on April 22. Dr. Knudson attended the Music Educators' National Conference, Philadelphia, March 21-26, where she participated on a panel. She is serving as secretary of the National Research Council and as secretary of the Committee on Housing and Equipment.

Dr. Margaret Cooper, director of the division of elementary education, served as chairman of a group of four to survey the seventeen kindergartens of St. Clair County, March 12-14. They visited each kindergarten on Thursday and Friday and at a dinner meeting on Friday discussed informally suggestions for growth with the kindergarten teachers and school principals. The others going were Dr. Rose Buehler, Mrs. Wallace McIntyre, who teaches the kindergarten in the Special Education Building, and Miss Madeleine Wolferz, who has charge of the Cardinal Court Kindergarten.

Waneta S. Catey, principal of the Special-Education School, talked to the women's group from the Second Presbyterian Church on March 5 in Bloomington on the topic "Education of All Children"; on March 13, to the Lion's Club on the topic "Education of All in a Democracy"; to the Pekin Chapter of the American Association of University Women on "Special Education and its Relationship to Regular Education"; and on April 14, to a Parent Teacher Association in Mascoutah, on "Mental Maturity of Children." She took part in a career day at Virden High School on April 2. On April 30, Mrs. Catey participated as a member of the faculty in charge of a workshop for chapter officers at the annual convention of the International Council for Exceptional Children, in Omaha, Nebraska.

Dr. John W. Carrington, director of laboratory-school experiences, was chairman of a group of representatives of teacher-education institutions in northern Illinois at Chicago Teachers College, on March 21. The purpose of the meeting was to determine teacher competencies toward which all institutions should work and to encourage cooperative work among teacher-education institutions. This is a project of the Illinois Education Association Commission on Teacher Education and Professional Standards. Dr. Carrington served on a panel at the North Central Association Annual Meeting on April 2. The subject was "Problems in Student Teaching in Teacher Education."

Elsie Brenneman, director of admissions, worked on a panel on "Implications of Recent Governmental Enactments" at the national convention of the American Association of Collegiate Registrars and Admissions Officers in Washington, D.C., in April. This panel was a part of one of the general sessions. She also served on a panel in a workshop at this same convention on "High School-College Relations."

Ruth Bird, assistant professor of health and physical education, attended the Illinois Association of Health, Physical Education and Recreation, District Meeting at Hinsdale, Illinois, April 19, and the state conference on Professional Preparation in Health, Physical Education and Recreation, at Allerton Park.

Vivian Tasker, instructor in special education, served as a member of the State Civil Service Examining Board for teachers of the deaf at Jacksonville, Illinois, on March 14.

Mary S. Arnold, assistant professor and supervising teacher in the third grade, showed her colored slides and talked about her trip to Europe last summer, to the Kappa Delta alumnae group at the Chapter House on March 3, and to the McLean County Public Health Nurses association meeting March 6. Miss Arnold was a resource person for a study group at the Illinois Association for Student Teaching meeting at Northwestern University, March 22.

Dr. Clarence Kurth, assistant professor of audio-visual education, gave a speech on "The Elementary Teacher's Utilization of Films and Filmstrips," to the Litchfield Elementary Teachers Association on March 18.

Dr. Mary C. Serra, associate professor in special education, addressed the Metcalf Parent Teacher Association on March 7.

Dr. Miriam Gray, associate professor of health and physical education, attended the annual meeting of the Midwest Association of College Teachers of Physical Education for Women at McCormick's Creek State Park, Spencer, Indiana, March 14-16.

Dr. Lewis Toll, director of the division of business education, had an article in the spring issue of the *National Business*

Education Quarterly on the "Administrative Problems of the Head of the Business Education Department of a Teachers College." Dr. Toll has been appointed to serve as chairman of a committee to prepare a business curriculum guide for the small high schools of Illinois. The Business Education Department sponsored a business-education conference at Illinois State Normal University on April 19 for the business teachers from twenty counties in Central Illinois and those who are the Illinois State Normal University graduates of the classes of 1950 and 1951 now teaching business subjects or who are seniors of the business-education department.

Doris Robie, assistant professor of health and physical education, and physical therapist in special education, has been placed on the Education Committee of the Illinois Chapter of the American Physical Therapy Association. The Chapter project for this year is Recruitment for Physical Therapists.

Doris Hardine, instructor and supervising teacher in instrumental music, conducted a clarinet clinic in connection with the McLean County High School Music Festival on March 28. Miss Hardine, playing her clarinet, accompanied by Miss Wilma Schell, gave a program, under the sponsorship of the Red Cross, in the hospital wards at Chanute Field on March 30. At the Amateur Music Club spring concert on May 5, at Presser Hall, Miss Hardine and Miss Schell played a group of numbers.

Dr. Rose E. Parker, director of the division of special education, attended, as a member of the Commission, meetings of the Illinois Commission for Handicapped Children in Chicago, March 13, for the purpose of considering the education of deaf children. She also attended, as director-at-large, the annual meeting of the International Council for Exceptional Children, Omaha, April 29-May 4, where she participated as chairman of the workshop dealing with the mental health of educationally retarded children. Dr. Parker took part in a symposium on teacher education for exceptional children, held at Hunter College, New York City, February 25 to 29. Her particular assignment was with the group dealing with gifted children. She served this spring on the Illinois State Civil Service examination board to select teachers for the various state institutions. She acted as general consultant for the revision of Bulletins on the Illinois Plan for Special Education for Exceptional Children published through the State Department of Public Instruction.

Rosemary McGee, instructor in health and physical education, gave a report on March 15 to the Professional Studies and Research Section of the Midwest Association of College Teachers of Physical Education for Women entitled "Procedure for Revision of Knowledge Tests Used in the Department of Health and Physical Education for Women at Illinois State Normal University." This report was presented at the Association meeting at McCormick's Creek State Park, Spencer, Indiana.

Dr. Harlan Peithman, associate professor of music, directed the men's glee club in the following concerts: for the Normal Optimist Club, on March 25; for the Bloomington Rotary Club, April 3; and for the Young Men's Club (Bloomington), April 29. Dr. Peithman took the men's glee club on tour in the Danville-Kankakee area April 7-9. He directed the Band and Choral Tri-County Festival in Granville. He adjudicated the State A Contest Festival at Urbana, April 25-26. He has an article entitled "Music Essentials and the Band" in the March-April issue of the *Educational Music Magazine.*

Dorothy M. McEvoy, instructor and supervising teacher for the deaf and hard

of hearing, attended the annual convention in Omaha, April 29-May 4, of the International Council for Exceptional Children, and took part in the mental health workshop conducted for three days as part of the convention program. She acted in the capacity of resource person for the discussion group "Establishing Good Mental Health Patterns in the Home."

Mrs. Mary R. Parker, assistant professor of art, who attended a silversmithing conference for one month at the Rochester (New York) Institute of Technology last summer, gave a demonstration lecture at the Springfield Art Association Craft Division and a demonstration—enamel on copper—at the Illinois Art Education Association meeting in Moline, Illinois.

Clyde W. Hudelson, director of the division of agricultural education, presided at the February and March meetings of the Bloomington-Normal Agriculture Club in Bloomington. He was elected president of this club last summer. He was a guest, in January, at the Illinois Duroc Hog Breeders' Banquet at the Illinois Hotel in Bloomington and at the annual McLean County Farm Bureau meeting in the Illinois Wesleyan Gymnasium. Mr. Hudelson attended the Holbert Medal nineteenth annual banquet on December 12 (an agriculture education project), and a farmers' meeting in Congerville, Illinois, on February 6 (a soils program). He has given several talks recently. He gave one on December 6 on "The Consideration of Better Plans for Better Living" before the School of Living, Western Avenue Community Center in Bloomington, an organization of which he was president for 1952. He also talked on "Landscaping the Home Grounds" before an adult-education group at Melvin High School on January 23; on "Longview Encouragement for Pork Producers" at the Yorkshire Hog Producers' Banquet at the Illinois Hotel in Bloomington, February 13; and on "Systems of Breeding" at the Corn Belt Kennel Club in Bloomington, March 1.

Dr. Cecilia J. Lauby, assistant professor and coordinator of off-campus student teaching, took part in the group discussion "Research in Curriculum" at the American Society for Curriculum Development Meeting in Boston, February 9-13. She was chairman of the nominating committee at a meeting of the Association for Student Teaching in Chicago, February 21-23. She attended meetings of the American Association of Colleges for Teacher Education in Chicago, February 21-23; of the American Association of School Administrators in St. Louis, February 23-28; of the Illinois Association for Student Teaching in Chicago, March 22; and of the Illinois Association for Supervision and Curriculum Development at Carbondale, April 25-26.

Dr. Harold Gibson, director of the bureau of appointments, gave a speech on "Crop Failures of 1952" at the Future Farmers of America annual banquet at Cerro Gordo, Illinois, on March 14. Dr. Gibson wrote an article for the April issue of *Illinois Education* entitled "Teacher Recruitment and Supply in 1952."

Francis R. Brown, assistant professor of mathematics, was the leader of an all-day workshop on the teaching of mathematics for junior and senior high-school mathematics teachers at Decatur on February 29. He read a paper at the morning session entitled "Motivation in Mathematics."

Joseph T. Cogdal, associate professor of health and physical education, conducted the Annual Spring Sports Clinic at Southern Illinois University at Carbondale on March 28 and 29. He handled the section on "Track and Field Coaching." This clinic is an annual affair which Southern Illinois University conducts for

track and baseball coaches from southern Illinois.

Dr. Norma Leavitt, associate professor of health and physical education, met with the National Section on Women's Athletics Sub-Committee on Basketball in Cincinnati, May 14-17. The committee work consisted of consideration of rules changes proposed for 1952-1953 and a complete recodification of the girls' rules. Dr. Leavitt attended the District Convention of the Midwest Section of the American Association for Health, Physical Education and Recreation in Cincinnati, March 17-19.

G. Bradford Barber, assistant professor of speech, attended the Pike County Vocational Guidance Conference and College Day at Pittsfield, Illinois, on March 11 and talked on "Teaching as a Career."

Dr. John Kinneman, professor of social science, spoke to the chapter of the American Association of University Professors at Blackburn College, Carlinville, Illinois, on the afternoon of April 20, on the subject of "Freedom for Professors."

Dr. Fred S. Sorrenson, professor of speech, has written a book, *Speech for the Teacher,* which Ronald Press in New York has just published.

Dr. C. E. Horton, director of the division of health and physical education, was elected secretary-treasurer of the Mid-west Association for Health, Physical Education, and Recreation for the fourth consecutive year at the meeting of the organization held in Cincinnati on March 17-20. Dr. Horton spoke at Bradley University on April 17 on the subject "Interscholastic Athletics in the Elementary School." He also spoke at the Exchange Club in Bloomington on March 5 on "Camping for the Physically Handicapped."

Dr. Ralph Micken, associate professor of speech, moderated the Bloomington-Normal Adult Education Forum Series again this year. These meetings were held in Bloomington High School every Monday evening at 7:30. Dr. Micken also moderated an assembly panel on "Morals and Ethics among Students" at Mason City High School on April 16.

Dr. Harry D. Lovelass principal of University High School, gave a talk before the Bloomington Kiwanis Club on March 31 on the topic, "Guidance Services in Modern High Schools." He served as a member of a panel with Dr. Marzolf and Dr. Belshe of Illinois State Normal University on the topic, "Emotional Problems of Children," at the faculty meeting of Normal Community High School, on March 19.